

**REMARKS**

Favorable reconsideration of this application as presented herein is requested. Claims 1-39 are pending in the present application.

In the Office Action mailed February 16, 2005, the Examiner rejected claims 1-6, 9, 18-23, 26, and 38 under 35 U.S.C. § 102(e); and rejected claims 32-34, 36, 37 and 39 under 35 U.S.C. § 102(a). The Examiner also rejected claims 7 and 24, claims 8, 10-17, 25, 27, 28, 30 and 31, claims 29 and 35 under 35 U.S.C. § 103(a).

Applicant respectfully responds to this Office Action.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1-6, 9, 18-23, 26, and 38 under 35 U.S.C. § 102(e) as being anticipated by Zhang (U.S. Patent No. 6,369,758).

The rejection contends that Zhang discloses determining a “spatial signature” including the amplitude and phase for each signal. With respect, the Examiner’s argument is traversed. As described in claims 1, 18, and 38, the complex signals at the outputs of the two antennas contain the amplitude and phase information of the signals. Using the complex signals, an estimate of the complex covariance matrix  $R$  is made. (See Applicant’s Specification, p.10, par. 1040.) Thus, Zhang does not disclose complex signals containing amplitude and phase information.

Consequently, the Zhang Patent does not anticipate the structure defined in claims 1, 18, and 38 of the present application under 35 U.S.C. § 102(e) for at least the foregoing reasons. Claims 5-6, 9, 19-23 and 26 are claims dependent from claims 1 and 18 and therefore include all the limitations of those independent claims. Since the Zhang Patent does not render claims 1-6, 9, 18-23, 26 and 38 unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.

Then, the Examiner rejected claims 32-34, 36, 37 and 39 under 35 U.S.C. § 102(a) as being anticipated by Maruta et al (U.S. Patent No. 6,205,166).

The rejection contends that Maruta discloses antennas that are spaced such a distance apart that their output signals are correlated with each other. In order to overcome this rejection, claims 32 and 39 have been amended such that they emphasize a spatial signature that includes

amplitude and phase. Maruta does not disclose a spatial signature containing amplitude and phase information.

Consequently, the Maruta Patent does not anticipate the structure defined in claims 32 and 39 of the present application under 35 U.S.C. § 102(a) for at least the foregoing reasons. Claims 33-34, 36, and 37 are claims dependent from claim 32 and therefore include all the limitations of that independent claim. Since the Maruta Patent does not render claims 32-34, 36, 37 and 39, as amended, unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.

Claim Rejections under 35 U.S.C. § 103

The Examiner also rejected claims 7 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Zhang (U.S. Patent No. 6,369,758) further in view of Richard (U.S. Patent No. 5,901,174). To establish a prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation of, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach or suggest all the claim limitations.

As mentioned above, Zhang does not disclose complex signals containing amplitude and phase information. Richard does not describe this feature either.

Applicant thus respectfully submits that claims 1 and 18 are not rendered obvious by the Zhang and Richard Patents. Claims 7 and 24 depend from claims 1 and 18 and therefore include all the limitations of those independent claims. Since the Zhang and Richard references do not render claims 7 and 24, unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.

The Examiner also rejected claims 8, 10-17, 25, 27, 28, 30 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Zhang (U.S. Patent No. 6,369,758) in view of Maruta et al (U.S. Patent No. 6,205,166).

As mentioned above, Zhang does not disclose complex signals containing amplitude and phase information. Maruta does not describe this feature either.

Applicant thus respectfully submits that claims 1, 10, 18 and 27 are not rendered obvious by the Zhang and Maruta Patents. Claims 8, 11-17, 25, 28, 30 and 31 depend from claims 1, 10, 18 and 27 and therefore include all the limitations of those independent claims. Since the Zhang and Maruta references do not render claims 8, 10-17, 25, 27, 28, 30 and 31, unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.

The Examiner also rejected claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Zhang (U.S. Patent No. 6,369,758) in view of Maruta et al (U.S. Patent No. 6,205,166) further in view of Richard (U.S. Patent No. 5,901,174).

As mentioned above, Zhang does not disclose complex signals containing amplitude and phase information. Maruta and Richard do not describe this feature either.

Applicant thus respectfully submits that claim 27 is not rendered obvious by the Zhang, Maruta and Richard Patents. Claim 29 depends from claim 27 and therefore includes all the limitations of that independent claim. Since the Zhang, Maruta and Richard references do not render claim 29, unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.

Finally, the Examiner rejected claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Maruta et al (U.S. Patent No. 6,205,166) in view of Richard (U.S. Patent No. 5,901,174).

As mentioned above, in order to overcome this rejection, claim 32 has been amended such that it emphasizes a spatial signature that includes amplitude and phase. Maruta and Richard do not disclose a spatial signature containing amplitude and phase information.

Applicant thus respectfully submits that claim 32 is not rendered obvious by the Maruta and Richard Patents. Claim 35 depends from claim 32 and therefore includes all the limitations of that independent claim. Since the Maruta and Richard references do not render claim 35, unpatentable Applicant respectfully submits that the rejections thereof be withdrawn by the Examiner.



PATENT

## REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: 04/15/05

By:

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**Expires: May 5, 2005**

**Harry L. Moatz  
Director of Enrollment and Discipline**